## 8. Note on the Breeding of the Otter. By Alfred Heneage Cocks, F.Z.S.

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A pair of Otters in my possession have lately bred; and as the details differ somewhat from those in the case of the breeding of this species in the gardens of this Society, as recorded in the 'Proceedings' for 1847, I venture to give the following particulars.

The female was sent to me in March 1873, from North Wales, as a cub of about 23/4 lb. weight, with the permanent incisor teeth just cut. From about the time she was full-grown she came in season nearly every month; but I never possessed an adult male until October 1879, when I obtained one in Hamburg. Owing to the female animal's extreme jealousy, I was not able to let them run together until they had been duly introduced to each other through the bars of adjoining cages for some weeks. The male soon afterwards became very ill with an abscess at the root of one of his lower præmolar teeth, the result apparently of some old injury; and although the female occasionally came in season, he took no notice of her advances, until early on the morning of July 17th, when they paired in the water, the female loudly chattering or whistling in a peculiar way all the while. They remained thus for about an hour: and the sides of the tank being perpendicular, they were of necessity swimming the whole time. Nothing further was noticed until the morning of August 12, when they again paired in the water. They remained together on this occasion for an hour and a half (about 6.30 to 8. A.M.).

On October 2, the female being evidently heavy with young, I separated the animals; and (about 5.45) in the afternoon of the 12th I heard young ones squeaking; in all probability they had not been born more than an hour or two when I discovered them. Reckoning from August 12th (the date of the second pairing), the gestation was therefore 61 days. We constantly heard the cubs squealing; but nothing was seen of them until the 25th, when I looked at them, and found them to be two in number, measuring about 8 inches in length, including the tails, which were about 2 inches, or perhaps rather more, in length, and which were held curved tight round on the abdomen, as in a fœtus. They were completely covered with a fine silky coat, very different from the somewhat rough "puppycoat" they afterwards assume. They were still blind, with the eyes very prominent. Within two hours after I had looked at them the mother removed them to the other bed-box. From this time they were frequently shifted by the mother from one box to the other. often daily, the longest stay in one box being from October 28th to November 15th.

On November 17, while I was in the act of putting clean straw into the unoccupied bed-box, the Otter came out of the other box with one of the cubs in her mouth, and, swimming with it across the tank, came right up to the box I was filling, as if totally unconscious of my



presence. On finding that the bed was not ready, she swam back with the cub across the tank; and although I left the cage as quickly as possible, she made altogether about six journeys across the tank (which is between 13 and 14 feet long), holding the cub by the neck in her mouth, and carrying it most of the way under water. I could not be sure about its eyes, but believe it to have been still blind. It appeared to be about 15 inches long, or possibly hardly so much. On the 29th the cubs were about 1 foot long in head and body, with tails 6 inches long. Weight probably about

2 lb. Eves open.

On the night of December 5, one of the cubs first showed itself. lying with its head hanging out of the box. On the 9th the cubs first came out of their own accord, and went into the water several times (both accidentally and purposely it was supposed); the tank being nearly brimfull, they were able to get out without assistance. On the 10th I first saw the mother carry fish into the box to try to tempt the cubs to eat. In the afternoon of the same day, the cubs were anxious to come out of the box; but the mother, hearing the gardeners at work close by, would not allow them. Presently one of the cubs having become very refractory, the old Otter seized it by the side of the neck, carried it to the tank, and gave it a thorough ducking, and thence straight back to bed, where, after another short demonstration of independence, it subsided. On the 12th one of the cubs when out, being frightened at an accidental noise, plunged without hesitation into the tank, and swam across nearly all the way under water.

On the morning of the 13th, on my feeding the old Otter while the cubs were out with her, she took two small roach to them, and tried to make them eat, taking first one fish, then the other, then both together in her mouth, and moving them about close in front of the cubs to attract their attention, at the same time uttering a peculiar whine or growl, or something between the two, which sounded ferocious. This she has continued to do every day since up to date of writing (January 15); and one cannot help thinking that her idea of teaching the cubs to eat is to encourage their natural rapacity by pretending she does not want them to have the food. On this first occasion, though they occasionally gnawed at the fish,

they appeared to get nothing off.

On the 28th, I turned out the cubs to exhibit; they had now

become shy, and bit fiercely.

On the 31st, about 11.15 P.M, I found the cubs out, and calling, as if hungry; so I gave them in a supply of food, which they appeared to appreciate. They have continued since that date to expect some food the last thing each night, in addition, since the 5th instant, to a meal about 6 P.M.; and about the same date they began to eat a little the first thing in the morning; but they now lie up all through the day, and the mother, when fed at other times than those specified, makes no attempt to induce them to eat.